Medium-Mu Twin Triode

7-PIN MINIATURE TYPE

With Heater Having Controlled Warm-Up Time

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage (AC or DC)	6.3	volts
Current	0.45 ± 6%	amp
Warm-up time (Average)	11	sec

Direct Interelectrode Capacitances (Approx.):

	Without External Shield	*With External Shield*[a]	
Unit No.1			
Grid to plate	1.6	1.5	μμf
Grid to cathode and heater	2.2	2.6	μμf
Plate to cathode and heater	0.4	1.6	μμf
Unit No.2			
Grid to plate	1.6	1.5	μμf
Grid to cathode and heater	2.2	2.6	μμf
Plate to cathode and heater	0.4	1	μμf

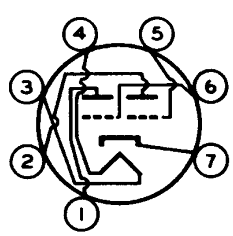
Characteristics, Class A_1 Amplifier (Each Unit):

Plate Supply Voltage	100	volts
Cathode Resistor[b]	50[c]	ohms
Amplification Factor	38	
Plate Resistance (Approx.)	7100	ohms
Transconductance	5300	μmhos
Plate Current	8.5	ma

Mechanical:

Operating Position	Any
Maximum Overall Length	2-1/8"
Maximum Seated Length	1-7/8"
Length, Base Seat to Bulb Top (Excluding tip)	1-1/2" ± 3/32"
Diameter	0.650" to 0.750"
Dimensional Outline	See *General Section*
Bulb	T5-1/2
Base	Small-Button Miniature 7-Pin (JEDEC No.E7-1)
Basing Designation for BOTTOM VIEW	7BF

Pin 1 - Plate of Unit No.2
Pin 2 - Plate of Unit No.1
Pin 3 - Heater
Pin 4 - Heater



Pin 5 - Grid of Unit No.1
Pin 6 - Grid of Unit No.2
Pin 7 - Cathode

AMPLIFIER — Class A_1

Values are for Each Unit

Maximum Ratings, *Design-Center Values:*

PLATE VOLTAGE	300 max.	volts
GRID VOLTAGE:		
Positive-bias value	0 max.	volts
PLATE DISSIPATION	1.5 max.	watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode	100 max.	volts
Heater positive with respect to cathode	100 max.	volts

Maximum Circuit Values:

Grid-Circuit Resistance:		
For cathode-bias operation	0.5 max.	megohm

RF POWER AMPLIFIER & OSCILLATOR — Class C Telegraphy

Key-down conditions per tube without modulation

Values are for Each Unit

Maximum Ratings, *Design-Center Values:*

DC PLATE VOLTAGE	300 max.	volts
DC GRID VOLTAGE:		
Negative-bias value	40 max.	volts
Positive-bias value	0 max.	volts
DC PLATE CURRENT	15 max.	ma
DC GRID CURRENT	8 max.	ma
DC PLATE INPUT	4.5 max.	watts
PLATE DISSIPATION	1.5 max.	watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode	100 max.	volts
Heater positive with respect to cathode	100 max.	volts

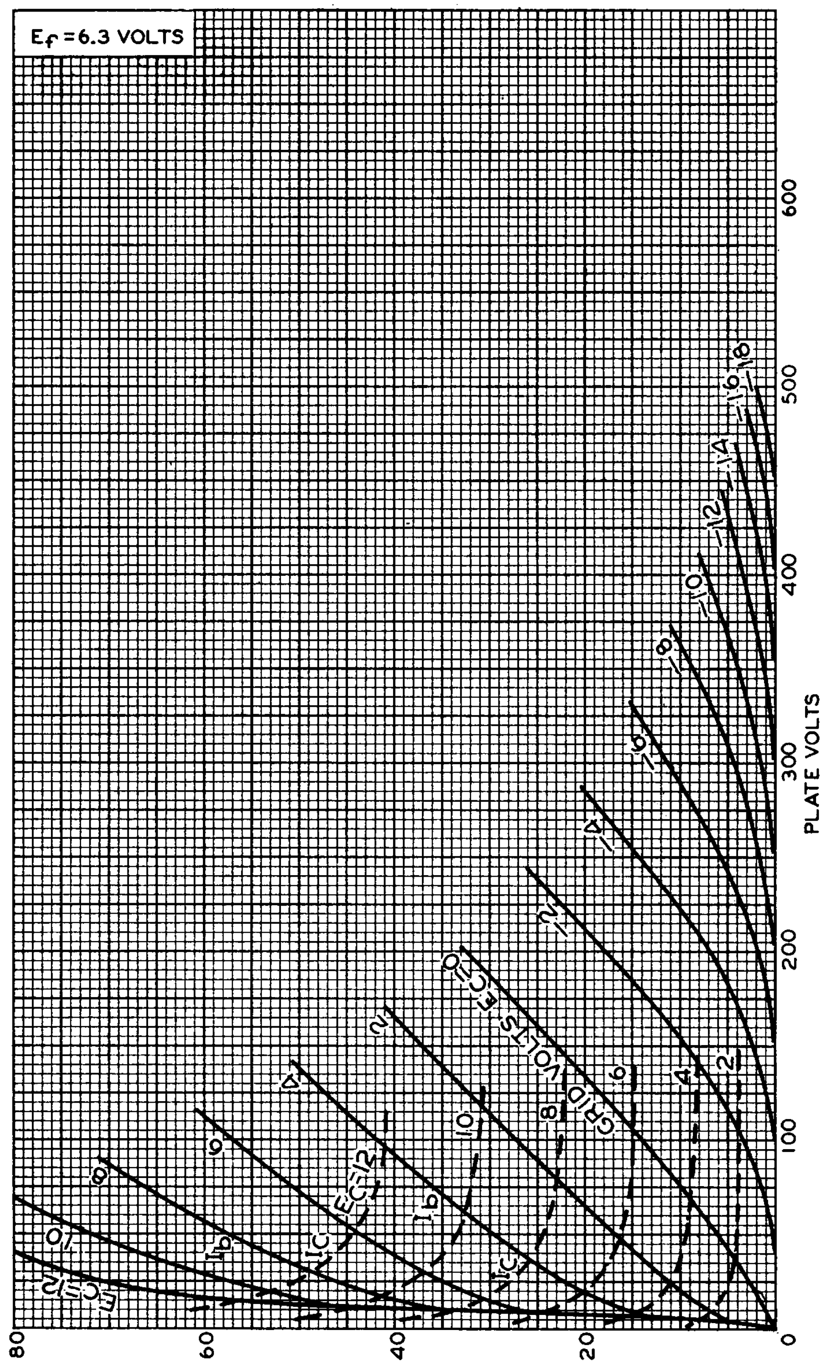
Typical Push-Pull Operation at Frequencies up to 50 Mc:[d]

Values are for Both Units

DC Plate Voltage	150	volts
DC Grid Voltage:		
From a fixed supply of	-10	volts
From a grid resistor of	625	ohms
From a cathode resistor of	220	ohms
DC Plate Current	30	ma
DC Grid Current (Approx.)[e]	16	ma
Driving Power (Approx.)[e]	0.35	watt
Useful Power Output (Approx.)	3.5	watts

[a] With external shield JEDEC No.316 connected to cathode.
[b] Fixed-bias operation is not recommended.
[c] Value is for both units operating at the specified conditions.
[d] Approximately 1 watt can be obtained when the 6J6A is used at 250 Mc as a push-pull oscillator with a plate voltage of 150 volts, with maximum-rated plate dissipation, and with a grid resistor of 2000 ohms common to both units
[e] For effect of load resistance on grid current and driving power, refer to *TUBE RATINGS—Grid Current and Driving Power* in the *General Section.*

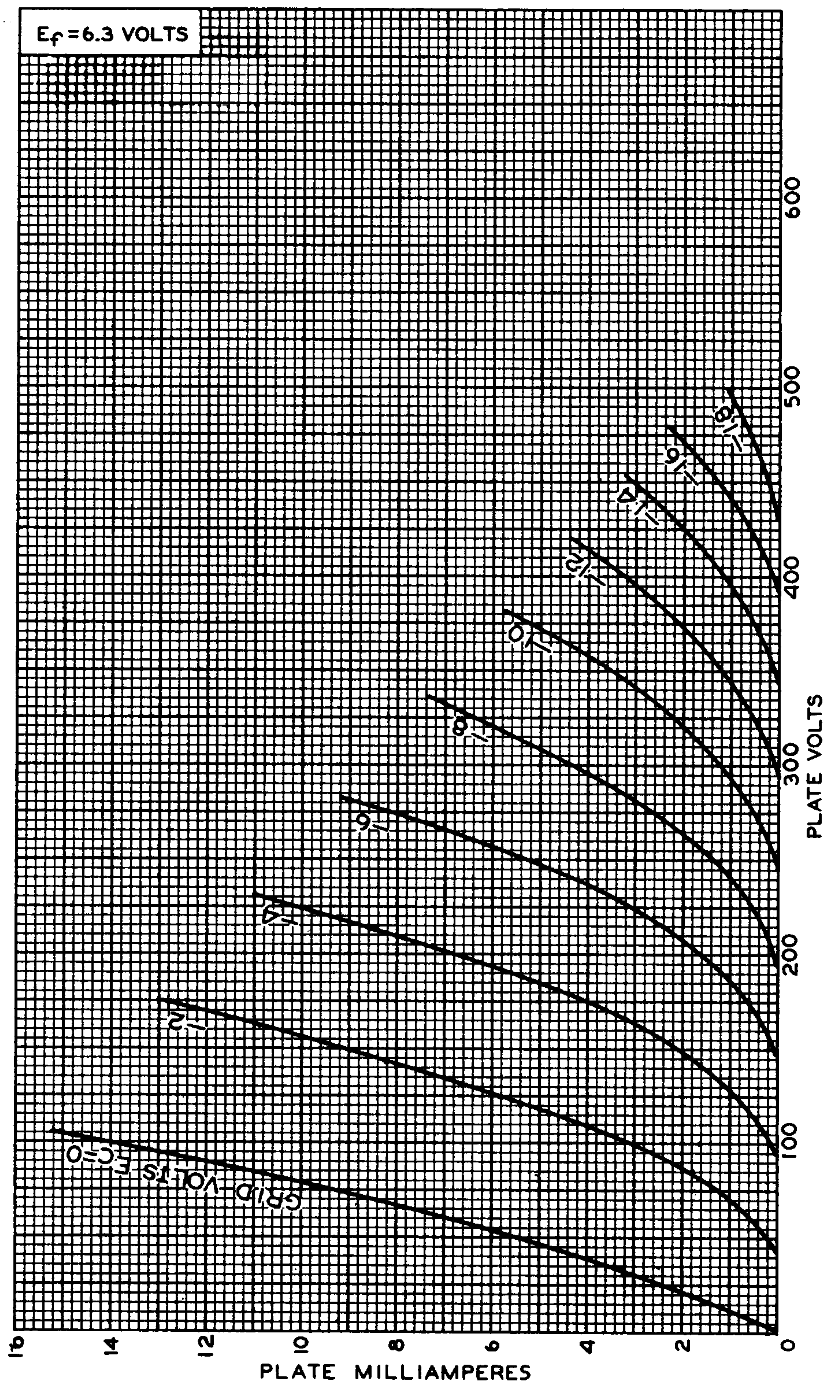
AVERAGE CHARACTERISTICS
Each Unit



92CM-6403R1

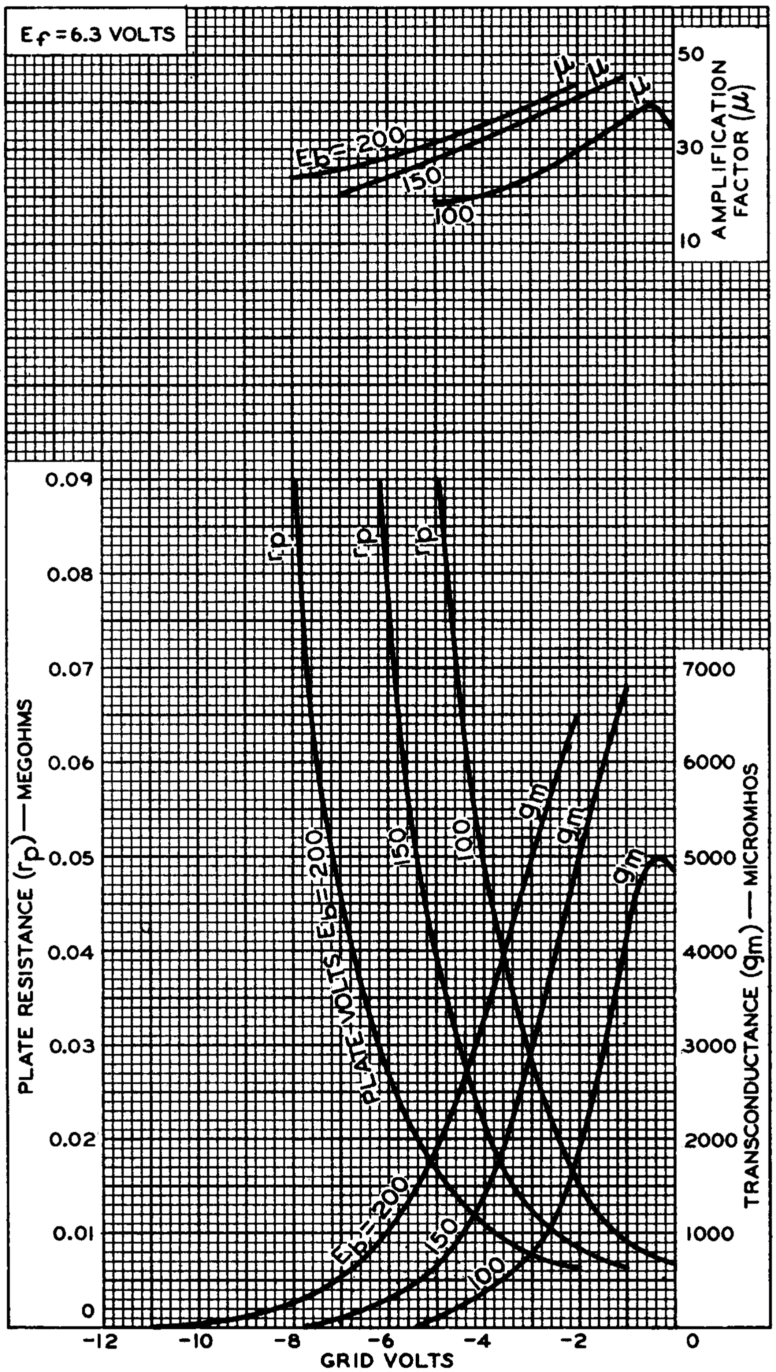
6J6A

AVERAGE PLATE CHARACTERISTICS
Each Unit



92CM—6402R1

AVERAGE CHARACTERISTICS
Each Unit



92CM-7672RI